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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,535	08/07/2000	KRZYSZTOF D. MALOWANIEC		1566

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EXAMINER
NORDMEYER, PATRICIA L

ART UNIT	PAPER NUMBER
1772	10

DATE MAILED: 05/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

T.D-10

Office Action Summary	Application No.	Applicant(s)	
	09/509,535	MALOWANIEC ET AL.	
	Examiner	Art Unit	
	Patricia L. Nordmeyer	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *20 and 21* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1 - 19 in Paper No. 9 is acknowledged. The traversal is on the ground(s) that no election was made in the prior PCT application and no restriction should be required in this application. This is not found persuasive because the special technical feature is well known in the art as shown by the prior art sent with the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

Oath/Declaration

Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim

does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 2 recites the broad recitation that the adhesion force is less than 20 cN/25 mm, and the claim also recites preferably less than 10 cN/25 mm, and especially less than 5 cN/25 mm which is the narrower statement of the range/limitation.

In the present instance, claim 4 recites the broad recitation the weight per unit of surface area of the composite material is 20 to 45 g/m^2, and the claim also recites preferably 25 to 40 g/m^2 which is the narrower statement of the range/limitation.

In the present instance, claim 6 recites the broad recitation that the weight per unit of surface area of the microfiber layer is 3 to 10 g/m^2, and the claim also recites preferably 4 to 6 g/m^2 which is the narrower statement of the range/limitation.

In the present instance, claim 7 recites the broad recitation that the weight per unit of surface area of the staple fiber layer is 15 to 25 g/m^2, and the claim also recites preferably 18 to 22 g/m^2, which is the narrower statement of the range/limitation.

In the present instance, claim 8 recites the broad recitation that the thickness of the film layer is 9 to 20 μm, and the claim also recites preferably 12 to 17 μm, which is the narrower statement of the range/limitation.

In the present instance, claim 9 recites the broad recitation that the tear strength of the composite material is at least 15 N/25 mm, and the claim also recites preferably at least 18N/25 mm, which is the narrower statement of the range/limitation.

5. Claims 1 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "having" in claim 1 is unclear which renders the claim vague and indefinite. It is unclear from the claim language if the claim is meant to be open-ended to other items being in the claim as the word "comprising" indicates, or if the claim is meant to be specific to the limitations in the claims as the word "consisting" would indicate.

The word "mean" in claim 1 is unclear, which renders the claim vague and indefinite. From the claim language is it assumed for purposes of examination that word "mean" is meant to have the meaning of "average" instead of being used in a legal meaning.

The phrase "in such a way that" in claims 1 and 15 is unclear, which render the claims vague and indefinite. It is unclear from the claim language how the layer is penetrated to form the selected spacing.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1 – 5, 10, 11, 14 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terakawa et al. (USPN 5,733,635) in view of Datta et al. (USPN 6,159,881).

Terakawa et al. discloses a laminated fabric made from 2 layers of fiber attached to a film layer (Column 8, lines 41 – 45) containing macropores where the film is liquid proof but breathable through the use of a water repellent finishing agent (Column 8, lines 49 – 55). The top layer of fiber laminate is made from microfibers with a diameter less than 10 μm (Column 6, lines 18 – 21) and placed directly on the other layer of fibers (Column 18, lines 65 – 67). The

layers of fibers and film can be needle punched to entangle and cause penetration between the layers and openings, macropores, would be formed that extend through all of the layers (Column 3, lines 32 – 36), which would inherently cause the thickness between the microfiber and film layers to be less the thickness of the middle fiber layer and the film layer penetrating the fiber layer. The composite is used to make a surface material that will retain liquid in disposable diapers and sanitary napkins (Column 1, lines 11 – 13) with a weight per surface area between 3 and 60 g/m^2 (Column 6, lines 57 – 59) when used for a diaper. However, Terakawa et al. fails to teach a staple fiber layer where the fibers have a diameter between 15 to 35 μm and the microfiber layer being disposed on the outside of the backing sheet.

Datta et al. teaches staple fibers with diameters between 5 to 100 μm (Column 5, lines 26 – 29) as a web layer in a absorbent material used in a diaper, sanitary napkin or incontinent article (Column 2, lines 59 – 63) for the purpose of forming an absorbent web layer that is strong after bonding the staple fibers together with heat and still is comfortable to the wearer of the article.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the staple fibers with a diameter between 5 to 100 μm in Terakawa et al. in order to form an absorbent web layer that is strong after bonding the staple fibers together with heat and still is comfortable to the wearer of the article as taught by Datta et al.

Regarding claim 2, Terakawa et al. discloses the microfiber layer to be made of fibers with diameters less than 10 μm. The diameter of the microfibers is deemed to be a cause effective variable with regard to the retention or adhesion force of the a hook material to the

outside of the composite material. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such the diameter of the microfibers through routine experimentation in the absence of a showing of criticality in the claimed microfiber diameter. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Terakawa et al., as modified with Datta et al., discloses the claimed invention except for the microfiber being disposed on the outside of the backing sheet. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the microfiber on the outside of the backing sheet to give the outside of the article a soft feel, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse,* 86 USPQ 70.

8. Claims 6 - 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terakawa et al. in view of Datta et al. as applied to claims 1 - 5, 10, 11, 14 - 19 above, and further in view of Tapp (USPN 5,169,712).

Terakawa et al., as modified with Datta et al., discloses the claimed composite material used in diapers and other sanitary absorbent articles above except for a microfiber layer with a weight in between 3 and 10 g/m^2, a staple fiber layer with a weight per unit surface area of 15 to 25 g/m^2 a film layer with a thickness between 9 and 20 μm, a film with micropores for admitting water vapor and micropores that have a diameter of 0.2 to 10 μm.

Tapp teaches micropores with diameters of 0.2 to 20 μm in a film layer (Column 11, lines 35 – 40) with a thickness of between 5 and 1000 μm (Column 16, lines 38 – 42) that allows the

transfer of water vapor while being impermeable to liquid (Column 27, lines 43 – 47) in a composite used in diapers where the composite is made of two layers of fibers with weights of 20 to 115 g/m^2 and 10 to 35 g/m^2 respectively (Column 26, line 68 to Column 27, line 3) for the purpose of making a composite where one layer contacts the skin, another layer gives strength and durability to the article and the third layer is impermeable to liquid but permeable to vapor, allowing clothing items to stay while giving the wearer comfort from moisture.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a film with a thickness between 5 and 1000 μm containing micropores and a composite with layers of a selected weight in the modified Terakawa et al. in order to make a composite where one layer contacts the skin, another layer gives strength and durability to the article and the third layer is impermeable to liquid but permeable to vapor, allowing clothing items to stay while giving the wearer comfort from moisture.

Since the modified Terakawa et al. discloses the composite material with the diameters of the individual fibers, the weight per surface area of the fibers and the film layer with micropores of a certain diameter, it would be inherent that the composite would have a tear strength of at least 15 N/25 mm.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,083,602 to Caldwell et al. and U.S. Patent No. 5,643,240 to Jackson et al. are stated to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (703) 306-5480. The examiner can normally be reached on Monday thru Friday from 8:15 a.m. until 4:45 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Patricia L. Nordmeyer
Examiner
Art Unit 1772

pln
May 15, 2002

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

5/14/02